

Appl. No. 10/050,818
Amdt. dated Aug. 7, 2003
Reply to Office Action of July 9, 2003

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AMENDMENT TO THE CLAIMS

The Listing of Claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

- Sub A*
1. (currently amended) A method of preparing a high stability selectable selective hydrogenate hydrogenation catalyst producing and using for use in DMCHD manufacturing including the steps of:
 - (1) — a preparing procedure for forming an Ru/Al₂O₃ catalyst including:
 - a. putting inserting 110 grams Al₂O₃ into a triple neck bottle under in a suction of vacuum conditions;
 - b. heating said bottle at a temperature of 110°C for 6 hours;
 - c. cooling to atmospheric ambient temperature then stopping removing the bottle from vacuum conditions;
 - d. to add adding a solution of 4.6 grams Ru/Cl₃ into said bottle and heating at a temperature of 60°C;
 - e. to dry solution of drying said solution by vacuum suction; and

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f. ~~to heat~~ heating said bottle in a heater at a temperature of 120°C for 16 hours ~~to preparation process thereof;~~ whereby the catalyst activity is raised by the steps of:

(2) — an activity raising procedure for said catalyst including:

a. ~~g.~~ removing the intermediate product of Ru/Al₂O₃ catalyst ~~out~~ from said bottle ~~after step f which is prepared from step (1),~~ and putting said intermediate product into a stainless steel breeder;

b. ~~h.~~ to add adding hydrogen gas into said breeder ~~with at~~ a predetermined velocity flow rate and ~~heated~~ heating at a temperature of 450°C for 2 hours; and

c. ~~i.~~ cooling to atmospheric temperature and then adding a small quantity of air for ~~passivate~~ passivating the surface of said catalyst ~~to obtain a so as to get high stability catalyst ready for selectable selective hydrogenating hydrogenation~~ in a DMCHD manufacturing process ~~therefore~~.

(3) — a DMCHD manufacturing process which said high stability catalyst is used for a selectable hydrogenating reaction including:

a. ~~putting~~ said Ru/AL₂O₃ ~~catalyst onto a fixing bed of a reactor;~~

b. ~~to dissolve~~ DMT (dimethyl terephthalate) in ~~to~~ ethyl acetate solution; and

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c. guiding DMT solution into said reactor with a predetermined velocity for a selectable hydrogenate reaction to provide a high yield capacity capacity of DMCHD manufacturing in high stability for a long term.

2. (currently amended) A method for producing high stability ~~selectable~~ selective hydrogenate hydrogenation catalyst according to steps a-f step (1) of Claim 1, wherein said Al₂O₃ and RuCl₃ has a fixed ratio of 110:4.6075 by w.t.

3. (currently amended) A method for producing high stability ~~selectable~~ selective hydrogenate hydrogenation catalyst according to step h step (2) of Claim 1, wherein said predetermined velocity flow rate of hydrogenate gas is 10 to 40 ml/min.

4. (withdrawn) A DMCHD manufacturing process according to step (3) of Claim 1, wherein a reaction temperature in said reactor is 100°C to 140°C.

5. (withdrawn) A DMCHD manufacturing process according to step (3) of Claim 1, wherein a reaction pressure in said reactor is 700 to 800 psi.

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6. (withdrawn) A DMCHD manufacturing process according to step (3) of Claim 1, wherein said MDT solution guided into said reactor has a velocity of 12 to 48 LHSV(h⁻¹).

7. (withdrawn) A DMCHD manufacturing process according to step (3) of Claim 1, wherein said high production of step (3) of Claim 1, wherein said high production ratio is over 90%.

8. (withdrawn) A DMCHD manufacturing process according to step (3) of Claim 1, wherein said catalyst has a long stability duration of 500 to 600 hours activation.
